

AN ALGA FROM THE EOCENE OF COLORADO

T. D. A. COCKERELL

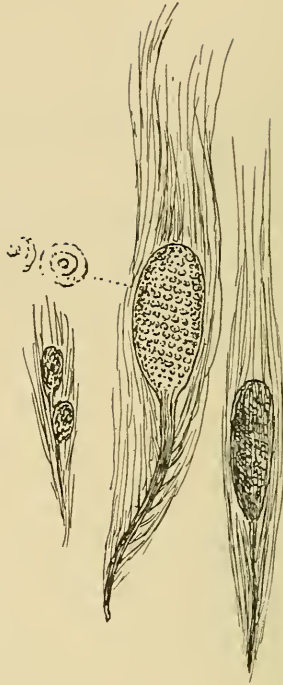
In 1923, Professor Junius Henderson and Mr. John Byram found a peculiar fossil plant in the Green River Eocene rocks of the Roan Mountains, Colorado. Two specimens are from their Station 25, on Kimball Creek; the other, with reverse, is from Station 24, Roan Plateau. My first impression was that we had a moss, but on using the binocular, the specimens having been covered with water, it soon became apparent that the characters were not at all those of a moss, but of an alga. No genus of fresh-water algae can be found that is at all similar, but the resemblance to certain of the marine Rhodomelaceae is so close that the plant may be provisionally included in that family. It offers one more indication that the waters of the lake were saline and that the Green River aquatic fauna and flora were remote descendants of a group of marine organisms isolated by orogenic movements perhaps near or soon after the end of the Mesozoic. The fishes long ago suggested such an idea; and the peculiar *Xantholithes* of the Wyoming Eocene, mistaken for *Ophioglossum*, may be another relic of this ancient group. There may have been a deep rift containing a lake comparable to Lake Baikal. The problem is a fascinating one and should be fully investigated. At the present time many precious fossils are to be found in the dumps of the many assessment holes in the oil shale; in a short time all this material will have decayed though fresh excavations may afford new opportunities. The fossil may be described as follows:

PHENACOCLADUS new genus

Small moss-like branches, bearing innumerable long capillary filaments, not attached to the branches altogether at random, but more or less distinctly verticillate; branches terminating in one or two stichidia, the spores arranged in numerous rows, apparently singular (not tetrasporic); stichidia oblong, obtuse, resembling the capsule of a moss.

***Phenacocladus hendersoni* n. sp.**

Stichidium when mature about 3.6 mm. long, and slightly over 2 mm. broad; at an earlier stage narrower. Sporangia in



about 16 transverse rows, each row with about eight, exhibiting a central round object surrounded by two circles, not always perfect, the general effect comparable to *Pleurostichidium*. Filaments long, some reaching a length of 18 mm. (compare *Polysiphonia*).

The type is No. 15659, University of Colorado Museum; Station 25, Kimball Creek.

For further information about the Green River problem see Henderson, "The Origin of the Green River Formation," Bull. Amer. Assn. Petroleum Geologists, Vol. VIII, pp. 662-668. 1924.

BOULDER, COLORADO.